

Applic. No.: 10/666,228

Amdt. Dated June 22, 2005

Reply to Office action of March 22, 2005

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1, 3, and 5-6 remain in the application. Claims 1 and 3 have been amended. Claims 2, 4, and 7-8 have been cancelled.

In item 2 on pages 2-4 of the above-mentioned Office action, claims 1-6 have been rejected as being anticipated by Lanzerstorfer et al. (US Pat. No. 6,605,841 B2) under 35 U.S.C. § 102(e).

The rejection has been noted and claim 1 has been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found in original claims 2 and 4 as well as on page 13, line 10 and page 14, lines 9-14 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

a gate electrode disposed substantially between said body height and the semiconductor body surface, said gate electrode being electrically insulated from the

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semiconductor body by said gate oxide and having a lower edge with a profile, said profile being at least partly obliquely angled relative to the semiconductor body surface and/or having a horseshoe shape with two jaws projecting at edges thereof.

According to amended claim 1 of the instant application, the profile of the bottom edge of the gate electrode is at least partly obliquely angled relative to the semiconductor body surface (see Fig. 1) and/or has a horseshoe shape wherein two jaws project at edges thereof (see Figs. 2 and 3). The advantages achieved by such specific profiles of the lower edge of the gate electrode are summarized on page 9, lines 5-25 of the specification.

In contrast, in Lanzerstorfer et al. the lower edge of the gate electrode 60A is rounded, which cannot be considered as at least partly obliquely angled relative to the semiconductor body surface or as having a horseshoe shape with two jaws projecting at edges thereof, as recited in claim 1 of the instant application.

Clearly, Lanzerstorfer et al. do not show "semiconductor body by said gate oxide and having a lower edge with a profile, said profile being at least partly obliquely angled relative to the semiconductor body surface and/or having a horseshoe

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shape with two jaws projecting at edges thereof," as recited in claim 1 of the instant application.

Additionally, the following difference between the invention of the instant application and Lanzerstorfer et al. should be observed: in the invention of the instant application the gate electrode (62) is clearly provided above the field electrode (63), so that in none of the embodiments is the top surface of the field electrode (63) on the same level as the top surface of the gate electrode 62 (this can be derived from the limitations in claim 1: "a first dielectric layer cladding said trench substantially to said body height," "a field electrode extending in said trench substantially from said trench base to an upper edge of said first dielectric layer" and "a gate electrode disposed substantially between said body height and the semiconductor body surface"). In the embodiments of Figs. 2 and 3, there is only a small overlap between the two electrodes (63, 62). In contrast, in Lanzerstorfer et al. the field electrode 40A envelopes the gate electrode 60A so that the field electrode 40A reaches the same level as the gate electrode 60A (see Figs. 1H and 2H).

Claim 1 is, therefore, believed to be patentable over Lanzerstorfer et al. and since dependent claims 3 and 5-6 are

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dependent on claim 1, they are believed to be patentable as well. Claims 2 and 4 have been cancelled.

In view of the foregoing, reconsideration and allowance of claims 1, 3, and 5-6 are solicited.

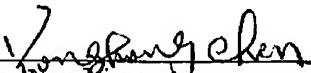
In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to

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Respectfully submitted,

  
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